GEOGRAPHIC NEWS BULLETINS

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Contents for Week of December 19, 1927. Vol. VI. No. 22

1. The Shepherds of the First Christmas and To-day.
2. A New Sultan Proclaimed in a New Morocco.
3. Glass: A Pennsylvania Specialty.
4. Uganda: A Land of Cotton in Africa.
5. Helgoland: Which Progresses from Big Guns to Big Lobsters.

NOTE: The next number of the Geographic News Bulletins will be issued for the week of January 2, 1928. There will be no issue for the holiday week when schools are not in session.

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A SHEPHERD OF BETHLEHEM PIPING ON HIS HANDMADE FLUTE
(See Bulletin No. 1)

HOW TEACHERS MAY OBTAIN THE BULLETINS

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The Shepherds of the First Christmas and To-day

"THE SHEPHERD life of the Holy Land has remained unchanged since the days of the first Christmas," writes John D. Whiting in a communication to the National Geographic Society describing the costume and the life of a typical shepherd boy.

The peasant shepherd boy is usually the youngest male laborer in the family. As the oldest son grows up to help the father with the sowing, plowing, reaping, threshing, and olive picking, a younger takes his place with the flock; and so on down the line until the lot of being the family shepherd finally falls to the youngest.

"The shepherd boy wears a simple robe of cotton; this is strapped around his body by 'a leathern girdle'; and he still, like John the Baptist in the wilderness, has his raiment or coat of camel's hair or of coarse handspun wool.

"This *aba,* or outer garment, is warm, sheds the hardest rain, and takes the place of a blanket. When the youth is out with the flocks at night he wraps his *aba* about him and, with a stone for a pillow, sleeps like Jacob of old, at Bethel. No wonder, then, that Moses, the lawgiver, commanded that 'if thou at all take thy neighbor's raiment to pledge, you shalt deliver it unto him by that the sun goeth down: for that is his covering only, it is his raiment for his skin: wherein shall he sleep?'

The *Aba* Resembles the Coat Jesus Wore

"Not the women, but more especially the men in their leisure hours, and the shepherd boys, as they lead the flocks on the mountains, spin the long, coarse wool into yarn for their own coats.

"That the spinner spins as he walks along precludes the use of a wheel; even the simple spinning wheel of our forefathers is beyond the ingenuity and needs of a fellah. A small contrivance of oak wood, into which he can wind the yarn like a ball, suffices. He gives the ball a dexterous twirl, and it spins about, twisting the separate wool strands into a coarse yarn.

"The yarn is taken to the village weaver. Most of it is a natural white; a smaller portion is of undyed black to produce the customary wide stripe. In making the better and finer garments, the cloth is woven wide enough for the required length of the *aba.* Sewn together sleeveless, of a single straight strip of goods, we are reminded that, after the Crucifixion, the Roman soldiers divided the garments of Jesus; but on his coat they cast lots, not being willing to rend it, for 'the coat was without seam, woven from the top throughout.'

He Carries the "Rod and Staff"

"The *kaffiyeh* is the shepherd's headgear—a square of white cotton, folded across the corners into a triangle and made secure by a thick, double black cord of goat's hair. This head covering is doubtless as old as the Bible stories.

"While the peasant folk often go barefooted, the women carrying their shoes in their market baskets balanced on their heads, the shepherd boy is always well shod, as through 'thorn and briers' he must travel, over rocky mountains and across deep valleys. These peasant shoes are made of 'rams' skins dyed red,' the soles are of untanned camel hide, and each shoe has a leathern latchet to fasten it.

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"AND THERE WERE IN THE SAME COUNTRY SHEPHERDS ABIDING IN THE FIELDS, KEEPING WATCH OVER THEIR FLOCKS BY NIGHT"

(See Bulletin No. 1)

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A New Sultan Proclaimed in a New Morocco

SULTAN MOULAY YOUSSEF of Morocco is dead. With the approval of the French Government the third son has succeeded to his father's double duty of ruler in the Protectorate and head of the Moslem religion in Morocco.

Dr. Gilbert Grosvenor, president of the National Geographic Society, traveled 2,500 miles in French Morocco last spring.

"The French Protectorate," he said upon his return, "has built in Morocco more than 15,000 miles of surfaced road and many thousand miles of dirt road during the last eight years. Wide and straight avenues radiate in all directions from Rabat, the capital of the Protectorate, penetrating even into the High Atlas Mountains, which has peaks as high as the Matterhorn and the loftiest summits of the Alps. The French have planted trees for almost the entire length of these roads, on both sides of the roadway, employing hundreds of thousands of eucalyptus, poplar, locust and plane trees.

Fez Had Running Water Before London or Paris

"Fez is probably the most interesting place in Morocco," Dr. Grosvenor continued. "It is a city of 150,000 people and is probably nearly two thousand years old. It contains many splendid examples of ancient Moorish art and architecture. It has a water supply system and running water that was installed many centuries before Paris or London had running water. The affairs of the city are directed by the hereditary Pasha of Fez, who appoints all the policemen and city officials and administers justice without any interference from the French.

"Property and life are secure. Shortly before our visit an American from Washington had his pockets picked while in the bazaars, which are always as crowded as New York subways in the morning. He reported his loss to the Pasha—ten 100-franc notes, $40. Before sundown every bill had been recovered and the pickpocket and his confederates were in jail. Debtors are imprisoned for failure to pay their obligations.

No Burden Too Heavy for the Women of Morocco

"Women probably hold in Morocco a lower place than in any country in the world. You see them bent double, carrying on their backs for many miles huge packs of fodder for the horses and cows. Men ride stallions only, for mares do no work and carry no loads because their strength must be saved so that they may foal strong, healthy colts. But no burden is too heavy for women. You will see a man riding comfortably astride his horse or donkey and his wife trudging behind in his dust and carrying his baby and the family belongings. And yet you see no discontented female faces. Crushing labor has been their lot for countless generations, and they accept it as stupidly and patiently as the donkeys.

"The French policy is not to interfere with the customs, the dress, the lands, or the religion of the people. They have built hospitals for the natives in all the large centers and are training native nurses. They insist on vaccination and hygienic safeguards. In their research laboratories they have already made important discoveries relating to the tropical diseases peculiar to Morocco, more particularly in dysentery, which is so troublesome and so little understood in all warm latitudes."

"The shepherd is specially accoutered for his work. His equipment includes as indispensable accessories the traditional 'rod and staff'—the first a light stick or crook, the second a long heavy cane. Tucked into the leathern girdle or slung across the shoulder is the *jrab*, a shepherd's bag or scrip, such as that carried by the ruddy youth David, who, leaving his father's sheep behind him, 'Chose him five smooth stones out of the brook, and put them in a shepherd's bag which he had, even in a scrip; and his sling was in his hand: and he drew near to the Philistine.'

Shepherd Boys Accurate with Sling Shot

"The *jrab* is made of a small kid skin, removed from the carcass without splitting it open. The leather of the hind legs is slit and braided and then knotted together at the ends, so as to form a long loop by which to carry it. In this scrip the boy puts his bread and olives or other food for the midday meal; also flint, steel, and tinder for striking fire. Besides, he may have a simple knife of Nazareth make, the curved blade folding into a slot cut into a handle of ram's horn.

"Every shepherd boy carries a sling, which he has made by cutting a tuft of long wool from the back of the sheep, spinning it into yarn while resting during the noon hours, and weaving a short, narrow web. The ends are braided into cords about a yard long and the simple sling is complete.

"With this sling the shepherd can drop a stone beyond a wandering sheep which does not heed call or cry; with it he can drive off an attacking beast, and, while he toys with it during the long hours of watching over the flocks, he relies upon it as the main weapon of defense in case of need.

A Primitive Flute to While Away the Long Hours

"Practicing at slinging, the shepherd boy shortly becomes an expert marksman, like the left-handed Benjamites of old, who 'could sling stones at an hair breadth and not miss.'

"The shepherd boy has another toy, if we may thus designate his *nayeh* or *zamoora*, a double flute made of reed. The two pipes, each punched with six holes, are bound together with wax and cord. Two smaller sections of reed, about an inch and a half long, with slits cut like an organ reed, inserted into one end, form the mouthpiece. A doleful tune of only a few notes is produced; but, simple as it is, it is capable of stirring the heart of the peasant."*

Bulletin No. 1, December 19, 1927.

*The above material is taken from the National Geographic Magazine for December, 1926. Further information about Palestine may be had from an article, "Village Life in the Holy Land," March, 1914, which may be consulted in your library. The December, 1927, issue of the National Geographic Magazine contains "The Pageant of Jerusalem," with 56 illustrations and a series of 27 color illustrations of life in the Holy City.

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Glass: A Pennsylvania Specialty

"PENNSYLVANIA fostered the manufacture of glass in America, and it is from Pennsylvania to-day that the American people get nearly one-third of their supply," writes John Oliver LaGorce in The National Geographic Magazine, reviewing the great industries of the Keystone State.

"To say that civilization's advancement is based on glass seems a gross exaggeration at first blush; and yet, when one reflects how many sciences and how much human knowledge came to the race through that commodity, the accuracy of the statement is apparent. The science of preventive medicine was born of the microscope. But for the telescope and the spectroscope the world would know about as much of astronomy as was known by the shepherds on the plains of Persia. One may read the whole list of technological industries without discovering lines of endeavor where glass does not play an essential role.

"The processes of manufacturing glass are extremely interesting. To see sand, soda, and lime mixed, subjected to heat, and turned into glass as transparent as the clearest water, or even as the very air itself, shows what liberties man has learned to take with Nature. Now as free-flowing as water, now as sticky as warm taffy, now as hard as flint, it lends itself to the manipulation of human hands and the purposes of man with astonishing versatility.

Mechanical Rolling Pin Flattens Plate Glass

"The mixed materials, technically known as the 'batch,' consist of white sand and such bases as potash, soda, lime, and lead. Small quantities of other materials are added as auxiliaries to change the color or nature of the glass. Manganese and arsenic are among the agents employed to make it colorless. For window glass a batch may be made up of 8,000 parts sand, 2,200 of soda sulphate, 2,500 of lime, 50 of arsenic, and 40 of powdered coal; or the amount of lime may be cut down and carbonate of soda substituted.

"Window glass is of two kinds—cast and blown. The cast is the plate glass of commerce. In making it the process is not dissimilar to the rolling of dough on a dough-board. A huge flat table with a rim around the edge is filled with a pile of hot, putty-thick glass. A big mechanical rolling pin spreads it out, after which it hardens. Then it is sent to the annealing furnace, heated, and allowed to cool gradually, for cooling either too fast or too slow would be ruinous. Finally it is ground down and polished and is ready for shipment.

"The process of making blown window glass is entirely different. In the hand-blowing, after the batch has been melted, the 'gatherer' takes a pipe about 5 feet long, with a bell-shaped head at one end and a mouthpiece at the other, and dips the bell-shaped end into the molten mass. A small ball of the glass adheres. He blows through the pipe and transforms this ball into a thick-skinned bubble. When this cools sufficiently it is dipped into the molten glass again, and more adheres. The process is usually repeated five times, the bubble growing thicker of skin each successive time.

Hand Process Requires Men with Powerful Lungs

"The pipe, with its bubble, is then given to a 'snapper,' or helper, who carries it to the 'blower's block,' where the 'blower' takes it. The latter workman is the king bee of the glass industry—big of body, powerful of lung, and deft of hand.

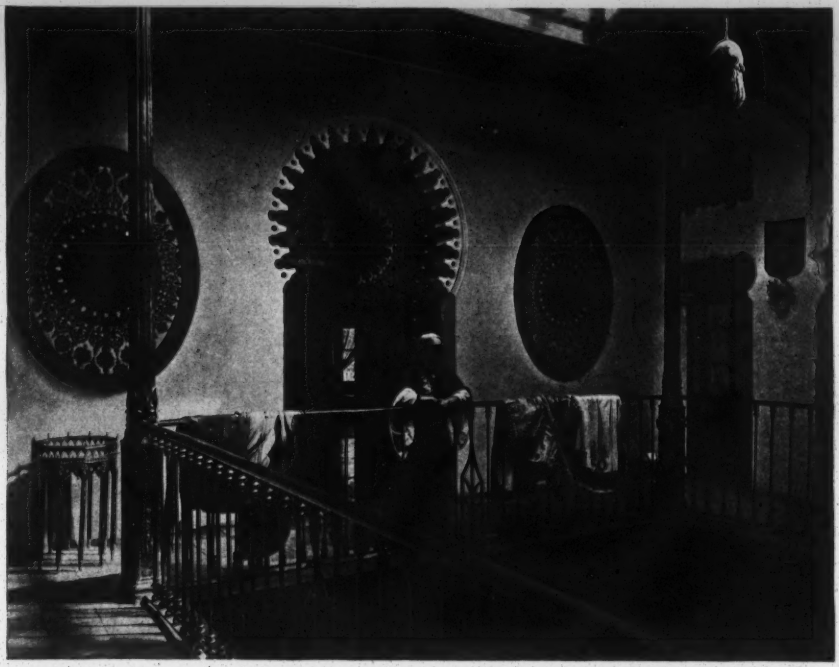
Dr. Grosvenor followed one of the new highways just completed to Khenifra, in the High Atlas, where is the residence of El Hassan, a Moorish chief who can muster 15,000 horsemen and who owns 5,000 cattle, 8,000 horses and 20,000 sheep.

A Moorish Chief Learns to Run Automobile on New Road

The chief's tent of black cloth woven from camel and goat's hair, in which Dr. Grosvenor was entertained, measures 90 by 150 feet, the entire floor being carpeted with purple rugs and the walls decorated with handsome draperies woven by the women of the clan.

"El Hassan can neither read nor write, such accomplishments being regarded by the Berbers as too effeminate for the chieftain of 15,000 horsemen," Dr. Grosvenor said. "He employs secretaries to keep count of his flocks and herds. Shortly before our visit, the French, on completion of the road over the mountains, had presented him with a powerful automobile which he is learning to drive."

Bulletin No. 2, December 19, 1927.



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MOORISH AND SPANISH ARCHITECTURE HAS BECOME POPULAR IN THE UNITED STATES

This is an example of Moorish architecture and decoration in Morocco. The woman leans on a railing looking down into the well of the patio. Note the tabouret with its intricate surface design and the two great plaques on the wall. Moslems, it is said, have great genius in the decoration of flat surfaces. Since their religion forbids them to reproduce living things by painting or sculpture their art runs to geometric designs. There is much color in their art and their vestments as shown in 16 color photographs printed in the National Geographic Magazine for March, 1925, accompanying the article, "Across French and Spanish Morocco."

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Uganda: A Land of Cotton in Africa*

A BRITISH commission has been touring through four great territories of Central and East Africa to report upon the plan to federate them. The commission is considering the creation of a vast new British dominion which would be as large as the United States east of the Mississippi.

The four territories to be studied by the commission are Kenya Colony, Tanganyika (a mandated territory), Nyasaland Protectorate, and Uganda Protectorate.

Hemmed in from the sea by Kenya Colony on the east, the Anglo-Egyptian Sudan on the north, Lake Victoria and Tanganyika Territory on the south, and the jungles of the Belgian Congo on the west, Uganda Protectorate, which is about twice the size of New York State, has become self-supporting. Ninety per cent of Uganda's exports are cotton.

Uganda, where less than thirty years ago natives and wild animals roamed at will, seldom seen by the white man, now is an important source of Britain's cotton.

The cotton crop in 1905 yielded about 350 bales. Now more than 200,000 bales are produced annually. It is not the small white population but the black, woolly-headed natives who are the Uganda cotton "barons." There are about 1,700 white inhabitants among a population of more than 3,000,000 natives. Many of the white men are experts who operate experimental farms and instruct the natives in cotton culture. More than a half-million acres of cotton-growing land are tended by the tribesmen. In eastern Uganda, where the best cotton is grown, native chiefs have large holdings. Their tribesmen take keen interest in small plantations, some of which are smaller than half an acre.

Uganda's Cotton Marketed Like Duluth's Iron Ore

Uganda's main outlet to the sea is through ports on Lake Victoria, where lake boats transport freight to Kisumu, British East Africa, the western terminus of the Uganda Railway that does not touch the land for which it was named. However, a branch line to the Protectorate is now under construction. Mombasa, on the Indian Ocean, at the eastern end of the railroad, is Uganda's seaport.

Boats leaving Uganda, when not filled with cotton, transport coffee, Para rubber, cocoa, sugar, ivory, bananas and elephant grass, used in the manufacture of paper, also rattan canes, recently found suitable for the manufacture of furniture; tea and iron. A small quantity of tobacco and flax is grown, and a small amount of gold and silver is mined.

Where small native villages once stood, the traveler now sees prosperous towns. Entebbe, the capital, is a beautiful little town of bungalows surrounded by well-kept lawns bordering wide streets, shaded from the tropical sun by huge trees. It occupies a peninsula almost surrounded by the blue water of Lake Victoria. Nearly every bungalow is a seaside cottage.

The government house is a gabled bungalow overlooking the lake. Save for a little business carried on in the Indian bazaars and the arrival of lake boats at

* For locations of areas mentioned in this Bulletin see The National Geographic Society's map of Africa (27x30 inches) which went to members with the issue of the Geographic for October, 1922.

He places the bubble in the 'block,' which is an iron mold set in water to prevent its becoming too hot, and lined with charcoal to keep the iron from discoloring the glass.

"By turning the bubble in the block, blowing air into it as he does so, and gradually drawing the pipe upward, he slowly transforms it into a pear-shaped affair. The lower part gradually becomes solid and too hard to be workable, even with his powerful lungs. The snapper puts it into the blow furnace, and when it is properly heated he gives it back to the blower. Standing over the 'swing hole,' the blower allows the weight of the plastic glass to elongate the pear into a cylinder, which he gives the desired diameter by blowing into it intermittently.

"But, although it has reached the desired diameter, the cylinder is not yet long enough to suit his purpose. So he reheats it and blows it over and over again until it attains the prescribed length.

"At this stage the cylinder is completed, but the free end is closed and the other end still adheres to the blowpipe. It is put back into the blow furnace and the free end heated until it is soft enough to permit the blowing of a hole through it. The resulting imperfect end is cut away by wrapping a hot glass thread around the cylinder above the imperfection, at the point of severance. Touched with a piece of cold iron, the imperfect section breaks asunder. The cylinder is freed from the blowpipe in a similar manner.

Machines Perform Work of Men Now

"We now have a perfect hollow cylinder of regulation window glass. But before it can be used in a window it must be flattened. To accomplish this it must first be split open. A hot iron or a charged electric wire, passed up and down the line of cleavage, plays the rôle of a pair of shears. It causes a strain-line to form from one end of the cylinder to the other, and when this is touched with a piece of cold iron the big roll breaks open as perfectly as though it were cut open with a diamond cutter and straight-edge.

"After this the roll of glass is sent to the annealing furnace. Heated to a proper degree, the glass becomes soft enough to permit the roll to be flattened. It is then carefully cooled and stored, ready for market.

"By the hand-blowing process cylinders up to as much as 6 feet long and 19 inches in diameter can be blown. Machine blowers have been gradually substituted and have revolutionized the art of making flat glass. All the larger cylinders are machine blown.

"In simple terms, a machine blower is an apparatus which automatically dips a big pipe into a kettle of molten glass and then gradually raises it, pulling all the molten glass upward as the pipe rises. A constant stream of air kept flowing in through the pipe causes the glass to assume the form of a cylinder. Dip a soda straw into a thimbleful of molasses, and blow through the straw as you lift it up from the molasses—that process would roughly duplicate the principle of the mechanical glass blower."*

*In an article by John Oliver LaGorce "Pennsylvania: Industrial Titan of America" is described fully in The National Geographic Magazine for May, 1919. Accompanying the article are 33 illustrations and a map.

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Helgoland: Which Progresses from Big Guns to Big Lobsters

FROM 16-inch guns to pedigreed lobsters in ten years!

Such is the contemporary history of Helgoland, Germany's island in the North Sea, which served during the World War as an anchored super-dreadnaught, bristling with guns. News dispatches report that Germany now finds Helgoland an important source of lobsters for breeding along the nation's coastline.

Passed around from one nation to another ever since it lost its distinction in the fourteenth century as one of the tiniest European republics, Helgoland came under the German flag in 1890. Kaiser Wilhelm II handed the Island of Zanzibar, off the east coast of Africa, to England for Helgoland.

Kaiser Traded "Whole Suit of Clothes for a Button"

Zanzibar is more than three thousand times larger than Helgoland and far more productive. The German people branded the transaction as "a trade of a whole suit of clothing for a button." They knew Helgoland was merely a flat rock, shaped like a pork chop, rising out of the North Sea, about 40 miles off the mouth of the Elbe and Weser Rivers. They knew that nothing grew there but a little grass, a few potatoes, fewer sheep, and a race of people who would not voluntarily assimilate with any other race. Even the fisheries, Helgoland's main resource, had fallen off.

The island had not been German very long before forts were under construction. The Helgolanders didn't like that, nor did they like the enforced military service of their sons. They felt that Germany's fights were not theirs. German police and German regulations were also unpopular, but greatest of all offenses against the dignity of this handful of humanity was the crumbling of the beloved cliffs of their "world" by the explosion of large guns during target practice. The peaceful fisher folk showed to the world their dislike for German militaristic domination in 1921 when they sent a petition to the League of Nations asking for neutralization or reannexation to Great Britain.

Helgoland Once Center of North Sea Herring Industry

Since the enforced removal of the fortifications under the Treaty of Versailles, Helgoland again presents the appearance of a peaceful little island rather than a heavily armored North Sea Gibraltar. And again the old verse of ancient mariners aptly describes it:

"Gron (green) is dat Land,
Rood (red) is de Kant (rock),
Witt (white) is de Sand,
Dat is de Flagg vun't hillige Land."

From its predominant natural colors, Helgoland took the red, white and green for its flag and for its curious postage stamps. The colors were also exploited in house painting and even in women's wearing apparel.

In the fifteenth and sixteenth centuries Helgoland was a center of North Sea herring fisheries. Then the herring veered back to Scotland's coast, and the islanders handed down a tale of the impiety by which they forfeited the boon.

the pier twice a week, Entebbe is quiet. It suggests a summer resort rather than the seat of government of a large, prosperous colony. Although the capital is little more than a stone's throw from the equator, its climate is not unpleasant. The thermometer sometimes reaches 115° by day, but the nights are cool, the mercury sometimes dropping as low as 50°.

Contrary to popular opinion that central Africa is jungle-bound, Uganda has a large network of roads linking up various trade centers. On the roads between important towns it is not uncommon to see natives riding bicycles and driving pleasure automobiles and motor trucks. And beside the road, modern steel plows are often seen turning the soil that only a few years ago had never been touched by anything but the crudest implements.

A good road connects Entebbe with Kampala, Uganda's largest and oldest town. Kampala was occupied by the British in 1890. Now it has a population of about 70,000 natives, Indians and whites. There are seven hills in Kampala whose crests are occupied by the population, while in the valleys are banana plantations and thriving gardens. The Nakasero hill is the government headquarters. Nearby the Mengo hill contains the residence and headquarters of Sir Daudi Chwa, the native King of Buganda, and his principal chiefs. Buganda is the main province of several that make up the Protectorate.

Native May Wear Cloak of His Own Cotton

There are numerous tribes in Uganda, but it is the Buganda natives with whom the traveler usually comes in contact. The forests of the west are inhabited by pygmies. Lions, leopards, monkeys, hippopotamuses and elephants are still to be found there. The Buganda natives are intelligent and, according to the missionaries, readily receive Christianity. Unlike many African tribes, they do not severely mark or deform their bodies and have taken to dress.

Both men and women usually wear a wide, cotton cloth, sometimes brightly colored, draped about their bodies from the shoulders to the knees. The cloth worn by a native may have been made from the raw product of his own plantation, after having been woven in the mills at Manchester, England.

Bulletin No. 4, December 19, 1927.

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HOW TO DRESS THE HAIR IN SOUTHEAST UGANDA

The hanging flap is composed of hair collected from the heads of deceased ancestors or off the head of the wearer, glued together and decorated with feathers. This is the fashion with the Teso people, but not with the Bugandas, who are one of the finest groups of native peoples found in Africa.

Yearly they would form a procession to march about the island to invoke the coming of the fish. One spring, when they had gone but half the route, the herring were sighted. They abandoned the rite and took to their boats. The herring left, and never returned.

The Island Is Half an Hour in Circumference

One can walk around the edge of Helgoland in half an hour, therefore there is little need for modern transportation facilities. Although many of the streets are only from 6 to 12 feet wide, this is one of the few places in the world that traffic congestion is not a major problem. Until a few years ago horses were unknown to the islanders. One story has it that when an old woman saw an Englishman ride one up the hills she dropped dead from the shock of what she believed was a supernatural creature.

Most of Helgoland's few more than two thousand inhabitants live in two little towns, Unterland, located on the sandy beach at the southeastern end of the island, and Oberland, nearly 200 feet above, on the edge of the cliffs. The two villages are connected by more than 170 wooden stairsteps and an elevator. Fairies were once supposed to lurk above the great staircase that mounted the rocky heights. When a baby was born its feet were buttered promptly so that the child would slip through the fingers of a fairy who might try to exchange it for the fairy's babe.

Helgoland's principal time consumers are fishing and accommodating bathers who flock to the sand dunes. Thousands of people from the continent visit Helgoland during the summer months to bathe in the cool North Sea waters.

Bulletin No. 5, December 19, 1927.

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REMOVING THE WASTE ENDS, AS DESCRIBED IN BULLETIN NO. 3

A cylinder of glass having been blown to the proper thickness and length, both ends are snapped off. A hot iron or electric wire is then passed around one side from end to end. The application of a cold iron to this heated streak causes the glass to crack, after which the cylinder is ready to be softened by heat and flattened into sheet glass for a schoolroom window, perhaps (see Bulletin No. 3).